

### REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and the reasons that follow.

A detailed listing is presented of all claims that are or were in the application, regardless of whether the claim(s) remain under examination in the application, with an appropriate defined status identifier.

In the specification, the title has been amended on page 1. Cancellation of claim 12 is requested, while claim 9 is amended and new claims 13-16 are added presently. With entry of these changes, claims 9 and 13-16 will be pending.

#### **Objection to the Title**

The Examiner objected to Applicant's title of the specification, and suggested a new title further reflecting the pending claims. As suggested by the Examiner, the title has been changed to the following new title: "DNA Molecules Encoding Polypeptides Having Isopentenyl Pyrophosphate Isomerase Activity and Methods for Producing Cartotenoids Using the Same."

#### **Rejection under 25 U.S.C. §112, first paragraph (written description requirement)**

On page 4-5 of the October 28<sup>th</sup> Office Action, the Examiner rejects pending claim 9, asserting a lack of adequate written description of the claimed genus. On pages 5-6 of the same Office Action, the Examiner rejects pending claims 9 and 12 under 35 U.S.C. §103(a). The Examiner asserts that claims 9 and 12 are unpatentable over Yamano et al. in view of Anderson et al. and in view of Albrecht et al. because the claims encompass a DNA molecule that encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 3.

While conceding none of the argument advanced the Examiner, applicants have amended claim 9 and canceled claim 12 to expedite prosecution in this case. Currently amended claim 9 now recites "a DNA molecule comprising a nucleotide sequence that encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO: 1 or SEQ ID NO: 2." SEQ ID NO: 1 or SEQ ID NO: 2 encode *Phaffia rhodozyma* and *Haematococcus pluvialis* IPP isomerase amino acid sequences respectively.

Applicants respectfully submit that claim 9 in its entirety is described in the specification in such a way as to convey to those skilled in the art that the inventors had

possession of the claimed invention at the time of filing. Likewise, the specification supports new claims 13-16 on page 6, lines 10-20, and page 9, lines 6-9, as well as in original claims 1 and 2, of the application as originally filed. New claims 13 and 14 also correspond to previously added and canceled claims 7 and 8. No new matter has been added.

Claims 9 no longer recites SEQ ID NO: 3, and therefore the Examiner's rejection under 35 U.S.C. §103 based on a DNA encoding SEQ ID NO: 3 is now rendered moot. Likewise, new claims 13-16 recite SEQ ID NO: 1 or 2, but do not recite SEQ ID NO: 3. The prior art references cited by the Examiner do not teach or suggest DNA or amino acid sequences corresponding to *Phaffia rhodozyma* or *Haematococcus pluvialis* IPP isomerases.

Applicants believe that the present application is in condition for allowance. Favorable reconsideration therefore is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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By



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